# ER Site No. 191: Equus Red (Thunder Range)

ADS: 1335
Operable Unit: Southwest Test Area



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## Site History

ER Site 191 is located near the southwest corner of Kirtland Air Force Base (KAFB), within the triangle formed by Magazine, Isleta, and University Ranch Roads. The site covers approximately 3.6 ac of land in the area referred to as South Thunder Range. The site is essentially flat, with only a slight slope to the west. Desert grasses and cacti are the only significant vegetation in the area .

The nearest well to ER Site 191 is the South Fence Well #1. This background well, located approximately 0.5 miles due south of the site along the southern boundary of KAFB, is monitored periodically by the Groundwater Protection Program Basewide Groundwater Surveillance Project. Well records indicate that the well is screened in Santa Fe Group sediments with an initial depth to water of 142 feet below ground surface. The well extends to a total depth of 510 feet below ground surface.

A single classified test (Equus Red) was conducted on November 6, 1983, to determine the effectiveness of a concrete containment structure with a foam-water suppression system in controlling the release of radioactive materials during the explosive deactivation of a simulated nuclear weapon. A simulated nuclear weapon was placed in a crate in a van and the van was parked inside a prefabricated concrete building (approximately 40 by 40 by 20 feet) with a concrete floor. The concrete building was surrounded by a mixture of 60 parts foam to 1 part water (approximately 3600 gallons of water) that was held in place by plywood panels. The simulated nuclear weapon was deactivated intentionally by detonating the high explosives (HE) in the weapon. Approximately 104 pounds of plastic-bonded explosive (PBX) is believed to have been used in the non-nuclear detonation. The concrete structure was destroyed by the explosion, and debris and contaminated soil are believed to have been removed to the SNL/NM Chemical or Mixed Waste Landfills at KAFB.

Depleted uranium (DU) and antimony oxide were used as tracers during the explosion. The DU component of the simulated weapon weighed 9.5 kilograms and 2 kilograms of antimony oxide,

in 40 packets containing 50 grams each, were stapled to the crate containing the weapon. Estimated amounts of tracer materials aerosolized during the test were 450 to 890 grams of DU and 200 to 400 grams of antimony oxide. The declassified report did not describe the fate of the remaining uranium and antimony.

## Constituents of Concern

DU
HE

## Current Hazards

There are no current hazards at this site related to contamination of the surface or subsurface soils.

## Current Status of Work

Sampling at the site was completed in 1995. Several of the samples indicated slightly elevated uranium readings. However, a risk assessment of these levels indicated that no cleanup was required.

A confirmatory sampling no further action (NFA) proposal for ER Site 191 was submitted to the New Mexico Environment Department (NMED) in December 1996. A request for supplemental information was received from NMED in June 1999. An RSI response agreeing to additional sampling was submitted to NMED in September 1999. NMED indicated that Site 191 is appropriate for NFA petition on April 25, 2001. The NFA was approved by NMED on November 19, 2001, after completing the public review and permit modification process.

## Future Work Planned

Project closure.

## Waste Volume Estimated/Generated

Radioactive soil waste was consolidated with Site 87's waste. Radioactive metal fragments were consolidated with ten other sites into one drum.

**Information for ER Site 191 was last updated Jan 22, 2003.**